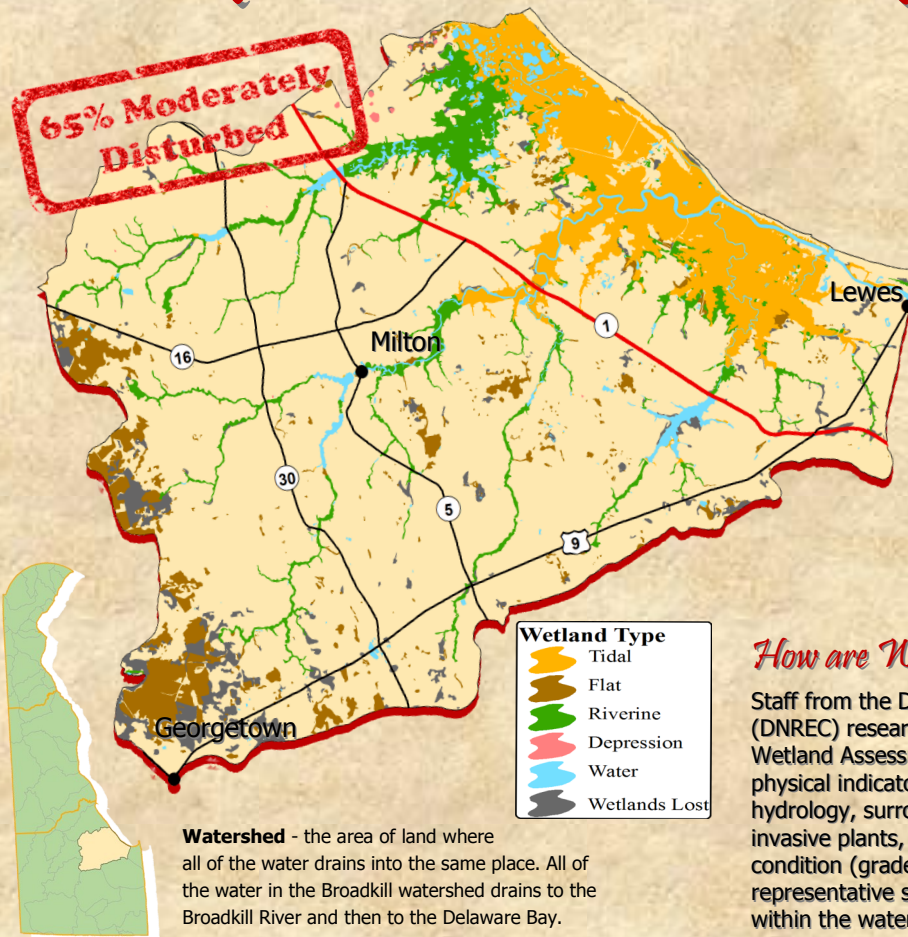


# Broadkill Wetland Health Report Card



**Watershed** - the area of land where all of the water drains into the same place. All of the water in the Broadkill watershed drains to the Broadkill River and then to the Delaware Bay.

The Broadkill Watershed located in Sussex County, Delaware was studied in the summer of 2010 to determine the overall wetland health. Invasive species, disturbed buffers, and ditching to drain wetlands were the most common stressors in the watershed. Compared to other watersheds that have already been studied in the State, the Broadkill had fewer severely stressed wetlands and the most moderately stressed wetlands in comparison. This report card compiles the findings of this study.

## Why are Wetlands Important?

Wetlands provide valuable and often irreplaceable services on the landscape. They contribute to our quality of life by protecting us from floods and storm damage, providing habitat for rare plants and animals, and purifying our water. They store water during storms thereby reducing flooding, serve as nursery grounds for commercial fisheries, and provide recreation and education opportunities.

## How are Wetlands Monitored?

Staff from the Department of Natural Resources and Environmental Control (DNREC) researched 94 wetland sites in the watershed using the Delaware Wetland Assessment Protocols in 2010. Measurements of biological and physical indicators of wetland condition were taken including vegetation, soils, hydrology, surrounding land use, and stressors impacting the wetlands (e.g., invasive plants, ditching, filling, development and agriculture). The overall condition (grade) for each wetland type is an average based on a statistically representative sample in the watershed. Due to the lack of available sites within the watershed Depressions were not given an overall grade.

## How to Manage Common Stressors Found in the Broadkill River Watershed

### Restoring a Buffer



**Diminished Buffers**, when homes or agricultural lands are developed too close to a wetland it blocks their ability to reduce erosion. Buffers also act as an additional filter to remove pollutants from the water. Landowners can plant buffers on their land or volunteer for local restoration projects, including the planting of rain gardens.

-It is recommended that wetland buffer regulations and codes are improved.



Across the state, the ability for wetlands to store excess flood water and protect the surrounding landscape is diminished due to **ditching and stream channelization**. Ditching affects flats, depressions, and tidal wetlands; while channelized streams affect riverine wetlands. As a landowner you can help by filling in ditches on your land and/or by rerouting channelized streams to mimic a natural stream flow.

-It is recommended that the protection of flats and other nontidal wetlands is improved to better maintain the natural hydrology of wetlands.



### *Phragmites australis*



**Invasive species**, like *Phragmites australis*, outcompete native plant species and diminish the biological diversity of a wetland. Landowners can work to remove invasive plants on their property and replant with native species.

-It is recommended that the extent and spread of *Phragmites* and other invasive species is controlled.

### Additional Recommendations to Improve the Overall Watershed Health

- Improve enforcement of wetland permitting and mitigation monitoring
- Design a wetland restoration plan for the Lower Delaware Bay Basin that includes the Broadkill River Watershed
- Support Delaware's Bayshore Initiative by securing funding for wetland restoration and preservation.
- Update tidal wetland regulatory maps.
- Develop incentives to maintain natural buffers of wetlands.

For more information

The full Broadkill Wetland Condition Report is available at:

<http://de.gov/delawarewetlands>

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## Flat Wetlands

C

Make up 24% of the watershed's wetlands and serve to collect surface and groundwater, feeding coastal plain streams that are valued as key wildlife habitats.



65% Moderately Disturbed

### What does it all mean?

After the sites were assessed an overall grade was assigned to each type of wetland. Within the watershed 65% of all the wetlands were determined to be moderately disturbed. Moderately disturbed sites maintain some components of minimal disturbance sites such as unaltered hydrology, undisturbed soils, intact landscape, or characteristic native plant and animal communities despite some alterations. Moderate disturbance sites may include one or two of the following: a large ditch or a dam either increasing or decreasing flooding, mowing, grazing, moderate stream channelization, moderate presence of invasive plants, forest harvesting, high impact land uses in the buffer, and hardened surfaces along the buffer.

## Riverine Wetlands

C+

Occur along streams and rivers and provide storage for flood waters and groundwater. Riverine wetlands, or riparian wetlands, make up 26% of the watershed wetland population and serve an important role in water quality and storage and forming habitat corridors.

## Tidal Wetlands

D+

Are some of the most productive ecosystems on earth. They are regularly flooded by the tide and supply habitat for important fisheries. Coastal residents rely on these wetlands to reduce flooding and storm damage. They represent approximately 49% of the watershed's wetlands.

### What you can do:

- ◇ If you are a landowner check out the [landowners guide](#) that includes stories of others just like yourself that worked to restore wetlands on their property.
- ◇ Plant native trees in a wetland buffer on your property or install a rain garden to increase your buffer.
- ◇ Manage invasive species on your property by removal and only plant native species.

For details look to the **Wetlands Public Participation Guidebook** on the Delaware Wetlands website on the "How You Can Help" page.  
<http://de.gov/delawarewetlands>



## Delaware Wetlands



<http://de.gov/delawarewetlands>

